

**Questions Raised by Participants at the
TMDL Implementation Guidance Review Workshop
June 14, 2005**

Question: Bill Wolinski / Talbot County: What role would the Department of Agriculture (MDA) play in the overall process?

Response: MDA plays an important role in the Tributary Strategies, which provides a broad foundation for the pollutant reduction aspect of TMDL implementation. The TMDL Implementation Guidance describes MDA's roles (page 3-10). MDA and Soil Conservation District staff members have provided technical assistance to local governments that have begun to investigate quantified pollution reduction planning analyses.

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Soil Conservation District Contacts: <http://www.mascd.net/scds/MDSCD05.htm>

MDE Contact: Jim George (410) 537-3579

Question: Jeff Zyontz / Montgomery County: Describe the effect of scale/scope on the analysis process. Can you clarify the relationship and distinctions between Impervious Surface and land use issues (he made reference to the threshold of 8% imperviousness leading to stream integrity impacts). Lack of "cookbook" and quantitative numbers related to community development (balance between farmland, urban land, forest, wetlands, etc.) leads to implementation difficulties. Have you considered problems associated with State boundary incentives & disincentives? Also, related to the issue of scale, the larger the geographic area the greater the flexibility: having to address several small locations individually poses cost and implementation issues which may realistically be unreasonable.

Response: TMDLs are generally developed at the Maryland 8-digit watershed scale, for which there are about 135 such watersheds in Maryland. All of the nutrient TMDLs developed thus far, except for lakes, have been established at the 8-digit scale. Numbers and analysis suggestions have been provided for implementation planning in Appendix E: "Nonpoint Source Nutrient Loading Assessments Using Chesapeake Bay Program Land Use Loading Coefficients." In the absence of better information they can be used to guide land use planning and for decisions on off-setting new loads, i.e., for assessing relative changes in loads associated with land uses.

With regard to impervious cover, the TMDL Implementation Guidance acknowledges two scales (site scale and subwatershed scale), although it does not endorse a fixed maximum percentage of impervious cover. For the site scale, the Maryland Stormwater Design Manual is cited in the TMDL Implementation Guidance as the primary means of ensuring consistency in this regard. Although much of the focus is on the site scale, watershed factors are considered in Section 4.0 of the Design Manual. For the subwatershed scale, Section 5.6 of the TMDL Implementation Guidance includes a case study that sets limits on the percentage of impervious cover as part of the land use planning process.

Issues of State boundaries have been considered. Section 5.8 of the TMDL Implementation Guidance, “Multi-jurisdictional Coordination,” addresses this issue in regard to allocating the allowable load among different jurisdictions.

Finally, the TMDL Implementation Guidance acknowledges the flexibility and efficiencies afforded by managing water quality on larger geographic areas. These two issues are important with regard to off-setting new loads. First, a larger drainage area offers more options for finding off-sets. Second, Section 5.3 on “Land Use Planning,” identifies the benefits of planning for TMDL implementation in advance, rather than addressing it on a project-by-project basis. This is particularly relevant to the subject of off-setting new loads.

Question: William (Bill) Stack / Baltimore City: Can you comment on how to reach a level which is capable of meeting both the requirement for restoring water quality and maintaining water quality. Given the time between listing and TMDL analysis, how do you off-set further degradation during this time period.

Response: The State and local governments have the authority and responsibility to protect water quality from further degradation during the period between the time the water is identified on the 303(d) list and the TMDL is developed. New sources of further degradation should be identified in advance so that decisions can be made to ensure the new sources are off-set by reductions.

Question: Glenn Faini / Charles County: How do pharmaceuticals fit into TMDL analyses?

Response: This is an emerging issue that is being tracked by the State. Research regarding the cause and effect relationships is still at the early stages, thus it is too soon to establish water quality standards. TMDLs are developed to control pollutants that exceed standards. Thus, TMDLs will only become part of the process if or when water quality standards are established for pharmaceuticals.

Question: Mary Searing / Ann Arundel County: How do you quantitatively define stream integrity?

Response: The Maryland Biological Stream Survey (MBSS) indices of biological integrity (IBI) are used to quantify integrity relative to living resources. A systematic procedure for interpreting the MBSS indices is used to determine whether a waterbody meets standards for the support of living resources. Although a similar index of physical integrity has been developed in Maryland, it is not presently used to determine if standards are being achieved.

Question: Elizabeth Weisengoff / Hartford County: What are projected costs for TMDL analyses? What happens to us if we do not meet the final TMDL number?

Response: The cost for TMDL development is about \$150,000 per analysis, of which over half of the cost is associated with monitoring and lab analyses. The cost of TMDL implementation has not been quantified; however, estimates associated with achieving the nutrient goals under the Chesapeake Bay Agreement indicate that it will be substantial. It is worth noting that in

cases of substantial, wide-spread costs, simple notions of “costs” break down because one person’s cost will be another person’s profit in the same geographic region.

What does it mean to “meet the final TMDL number?” First, it is recognized that achieving reductions to meet TMDLs is a long-term proposition. We will be judged by demonstrating that we are making progress, which is why tracking and assessments are so important. Second, having a plan that documents a way of achieving the load reduction goal is needed to justify government decisions that allow new loads. The State will be working with local governments on this in the coming year. Third, new sources of pollutants need to be off-set, which implies having the technical and administrative management capacity to support the related decisions.

Given that the reduction of excessive loads is a long-term challenge shared by many parties, any future challenge would most likely be associated with the failure to off-set new loads. This applies for any waterbody on the 303(d) list, regardless of whether a TMDL has been established. The potential negative repercussion could be the interruption of development activities. It is for this reason that the TMDL Implementation Guidance strongly encourages establishing the technical and administrative capacity to manage the process of off-setting new loads. The State is still working with a local government Advisory Group on developing operational guidance.

Question: Dominic (Nick) Motta / Prince George’s County: What are we being asked to do differently (in terms of clean up procedure)?

Response: The TMDL Implementation Guidance calls for developing the technical and administrative capacity to manage pollutant loads in a quantitative manner, beginning with loading estimates at the comprehensive land use planning stage. The State is still working with a local government Advisory Group on developing operational guidance.

Question: Mark Symborski / Montgomery County: How much does uncertainty affect the TMDL number?

Response: TMDLs are supposed to be developed with a margin of safety that is intended to address uncertainty from the standpoint of ensuring environmental protection. It is widely acknowledged that there is uncertainty in estimating nonpoint source loads, and the reductions achieved by implementing control practices. However, many actions that require an authorizing decision by State or local government are certain to increase loads or stresses that will degrade stream systems. Procedures need to be institutionalized to ensure that reasonable steps are taken to off-set those impacts.